

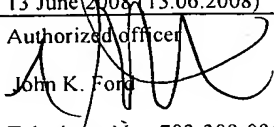
PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 10303-62177	FOR FURTHER ACTION		See Form PCT/IPEA/416
International application No. PCT/US05/02807	International filing date (day/month/year) 31 January 2005 (31.01.2005)	Priority date (day/month/year) 29 January 2004 (29.01.2004)	
International Patent Classification (IPC) or national classification and IPC IPC: F24F 5/00(2006.01);F24H 7/04(2006.01);F25B 29/00(2006.01) USPC: 165/219,218,220,221,236,50			
Applicant COMEAX, VERNAL J			
<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 4 sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input type="checkbox"/> (sent to the applicant and to the International Bureau) a total of ___ sheets, as follows:</p> <p style="margin-left: 40px;"><input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p style="margin-left: 40px;"><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) ___, containing a sequence listing and/or tables related thereto, in electronic form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>			
<p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the report</p> <p><input type="checkbox"/> Box No. II Priority</p> <p><input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input type="checkbox"/> Box No. IV Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input type="checkbox"/> Box No. VI Certain documents cited</p> <p><input checked="" type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input type="checkbox"/> Box No. VIII Certain observations on the international application.</p>			
Date of submission of the demand 29 August 2005 (29.08.2005)		Date of completion of this report 13 June 2008 (13.06.2008)	
Name and mailing address of the IPEA/ US Mail Stop PCT, Attn: IPEA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (571) 273-3201		Authorized officer  John K. Ford Telephone No. 703-308-0861	

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/US05/02807

Box No. I Basis of the report1. With regard to the **language**, this report is based on:

- ☒ the international application in the language in which it was filed.
- ☐ a translation of the international application into English, which is the language of a translation furnished for the purposes of:
- ☐ international search (under Rules 12.3(a) and 23.1(b))
- ☐ publication of the international application (under Rule 12.4(a))
- ☐ international preliminary examination (under Rules 55.2(a) and/or 55.3(a))

2. With regard to the **elements** of the international application, this report is based on (*replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report*):

- ☐ the international application as originally filed/furnished
- ☒ the description:
 pages 1-14 as originally filed/furnished
 pages* NONE received by this Authority on _____
 pages* NONE received by this Authority on _____
- ☒ the claims:
 pages NONE as originally filed/furnished
 pages* NONE as amended (together with any statement) under Article 19
 pages* 1-3 received by this Authority on 29 August 2005 (29.08.2005)
 pages* NONE received by this Authority on _____
- ☒ the drawings:
 pages 1/8-8/8 as originally filed/furnished
 pages* NONE received by this Authority on _____
 pages* NONE received by this Authority on _____
- ☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing.

3. ☒ The amendments have resulted in the cancellation of:

- ☐ the description, pages _____
- ☒ the claims, Nos. 5
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to the sequence listing (*specify*): _____

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to the sequence listing (*specify*): _____

5. ☐ This report has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 70.2(e)).

* If item 4 applies, some or all of those sheets may be marked "superseded."

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.
PCT/US05/02807**Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement****1. Statement**

Novelty (N)	Claims <u>2, 3, 4, 7, 8, 9 and 11-15</u>	YES
	Claims <u>1, 6 and 10</u>	NO
Inventive Step (IS)	Claims <u>11-15</u>	YES
	Claims <u>1-4 and 6-10</u>	NO
Industrial Applicability (IA)	Claims <u>1-4 and 6-15</u>	YES
	Claims <u>NONE</u>	NO

2. Citations and Explanations (Rule 70.7)

Claims 1, 6 and 10 lack novelty under PCT Article 33(2) as being anticipated by Newton. Newton discloses three-way valves 18 and 100 that are equivalent to two of applicant's disclosed two-way valves. Tank 110 stores cold water and tank 112 stores hot water.

Claims 4 and 9 lack an inventive step under PCT Article 33(3) as being obvious over Newton in view of Tamblyn '571. Tamblyn '571 teaches a total of four two-way valves 44, 46, 48 and 50 to feed hot and cold water from a partitioned tank. To have replaced the three-way valves 18 and 100 of Newton with four two-way valves would have been obvious to one of ordinary skill in the art because they perform the same function.

Claims 2, 3, 7 and 8 lack an inventive step under PCT Article 33(3) as being obvious over Newton in view of Tamblyn '992 or Yamaoka (Figure 6). Tamblyn '992 discloses a cylindrical tank (Fig. 2) and plural tanks (Fig. 9). That have a piston 30 that separates the two tank portions. Yamaoka, Figure 6, piston 34, teaches essentially the same thing. To have used this type of tank in the prior art to conserve space and increase storage capacity would have been obvious to one of ordinary skill in the art.

Claims 11-15 meet the criteria set out in PCT Article 33(2)-(3), because the prior art does not teach or fairly suggest the series connection with the supply line of the two-pipe hydronic air-conditioning system.

Claims 1-4 and 6-15 meet the criteria set out in PCT Article 33(4), and thus satisfy industrial applicability because the subject matter claimed can be made or used in industry.

----- NEW CITATIONS -----

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

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Box No. VII Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

Claims 10 and 15 (as amended under Article 34) both depend from cancelled claim 5. For purposes of examination both of these claims were assumed to depend from any one of claims 1-4.